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NOTES ON GEOGRAPHIC DISTRIBUTION

Perciformes, Cichlidae, *Crenicichla tendybaguassu* Lucena and Kullander, 1992: First record for Uruguay

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ABSTRACT: The present note is the first record of the pike cichlid *Crenicichla tendybaguassu* for Uruguay, extending its distribution about 400 km to the South. The presence of *C. tendybaguassu* and their co-occurrence with other priority species for conservation in Uruguay adds greater value to conservation of the Cuareim River (Middle Uruguay River). Coloration of live breeding females is described for first time.

The genus *Crenicichla* Heckel, 1840, with about 80 valid species, is the most speciose genus of Neotropical cichlids (Kullander *et al*. 2010). The genus is distributed from northern South America to the Negro River in Patagonia, Argentina (Casciotta 1987). In Uruguay, seven species of the genus have been recorded: *C. punctata* Hensel, 1870, *C. minuano* Lucena and Kullander, 1992, *C. scottii* (Eigenmann, 1907), *C. lepidota* Heckel, 1840, *C. celidochilus* Casciotta, 1987, *C. vittata* Heckel, 1840, *C. missioneira* Lucena and Kullander, 1992 (Kullander *et al*. 2010; Zarucki *et al*. 2010).

In November of 2010, during fieldwork (permit N° 202/1382/2010, DINARA), we collected 11 specimens of *C. tendybaguassu* (71.3 to 90.9 mm SL) (Figures 1-2) in the upper Cuareim River (30°46' S, 56°02' W) (Figure 3), Artigas Department, northern Uruguay, co-occurring with other five species of *Crenicichla*: *C. minuano*, *C. scottii*, *C. lepidota*, *C. celidochilus* and *C. missioneira*. *Crenicichla tendybaguassu* has been previously recorded in Brazil from upper Uruguay River basin (see the Appendix). In Argentina, it is known from the Province of Misiones, in the Soberbio River (Lucena and Kullander 1992). Here, we present the first record of *C. tendybaguassu* for Uruguay, extending the known distribution by approximately 400 km to the South (Figure 4), and describe the live coloration of breeding female that was previously unknown.

Ten specimens were preserved in 10 % formalin and later transferred into 70 % ethanol, and one was fixed in 95 % ethanol. We deposited the examined specimens at the collection of Facultad de Ciencias, Montevideo, Uruguay (catalogue number ZVC-P 9759) and Museo Nacional de Historia Natural de Montevideo (catalogue number MHNM 3280).

Uruguayan specimens present some of the diagnostic characters proposed by Lucena and Kullander (1992): smooth margined preopercle, isognathous and long pointed jaws, suborbital stripe reduced to a few spots, and hypertrophied lips with long medial lobes, the later being unique to the genus. Our body depth measurements show a wider range (19.1-22.9% of SL) than those presented by Lucena and Kullander, 1992 (20.6-22.8% of SL). Furthermore, suborbital spots were not restricted to the margin of the orbit, but also were present in other regions of the cheek.

Coloration in live breeding females: Background colour of body greenish gray. Dark gray preorbital stripe between anterior margin of orbit and snout tip. Postorbital stripe between posterior margin of orbit and preopercle or opercle distal margin dark gray. Suborbital region greenish gray with brown or dark red spots. Anterior and posterior region of iris red. Flanks with irregular black blotches below and above upper lateral line, reaching dorsal-fin

FIGURE 1. Preserved male of *C. tendybaguassu* (ZVC-P 9759). Scale bar represent 1 cm.

base. Pectoral, pelvic, anal, caudal, and posterior region of dorsal fin yellowish. Caudal fin with a black subcircular spot, just above midline of fin. Basal and middle region of dorsal fin red, and distal region black. Black subcircular spot in the middle of dorsal fin, in some specimens bearing an irregular white ring. Orange pigmentation on flank at level and behind pectoral fin.

Scarce knowledge about population sizes and species distribution limits our understanding of ecological and evolutionary processes and also affects our capacity to use this information in conservation management plans (Maitland 1995). As with much of the Neotropical region, knowledge of the freshwater ichthyofauna of Uruguay is clearly incomplete. A recent study demonstrates the importance of the Cuareim River as a high-diversity area for freshwater fishes in Uruguay, with the presence of some species only recorded previously from the Upper Uruguay River basin (Zarucki *et al*. 2010). The presence of *C. tendybaguassu* and their co-occurrence with other priority species for conservation in Uruguay (Soutullo *et al*. 2009) adds greater value to conservation of this basin.

Figure 2. Live specimens of *C. tendybaguassu* (ZVC-P 9759); female (A) and male (B).

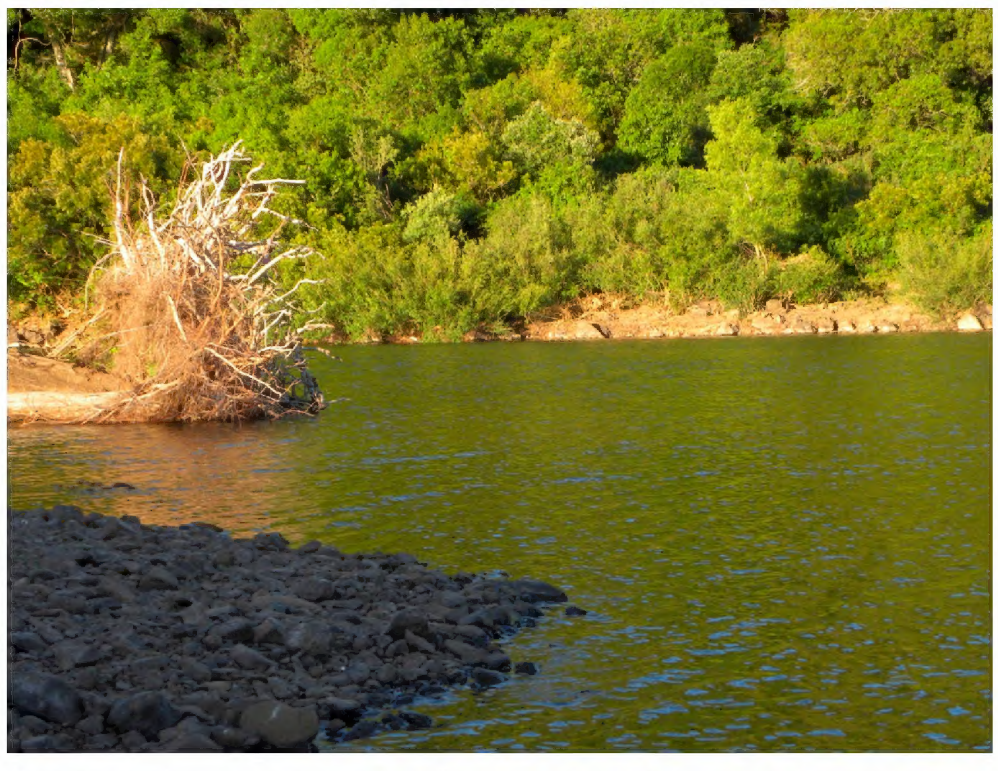

Figure 3. Cuareim River at collection site, tributary of Uruguay River, Department of Artigas, Uruguay.

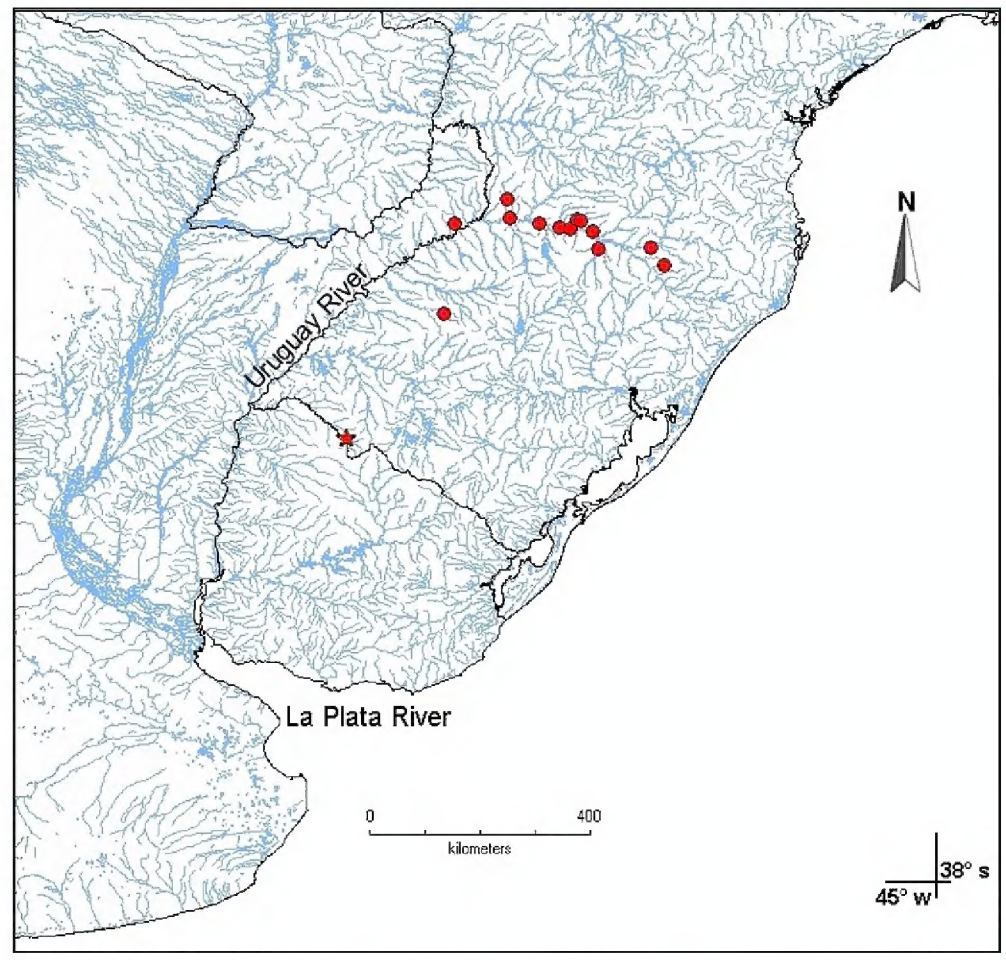

Figure 4. Distribution of *C. tendybaguassu* in Uruguay River basin. Red dots = previously known localities, Red star = present record.

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Appendix 1. Previous museum records. MCP: Colección do Museu de Ciência e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre.

BRAZIL: State of Rio Grande do Sul: **MCP 10876,** Holotype, Municipio Santo Angelo, rio Piratinim, Fazenda dos Hinz, Coimbra, 28°42' S 54°25' W, Col. R. Reis, L. R. Malabarba and S. Mallmann, 20/XII/1985; **MCP 12466,** Paratype, Rio Ligeiro, on the road Marcelino Ramos-Maximiliano de Almeida, 27°38' S, 51°52' W, Col. E. Pereira *et al*., 3/X/1988; **MCP 19030**, Rio Uruguai entre a foz dos rios Passo Fundo e Chapecó, Nonoai,

27°13' S, 52°50' W. State of Santa Catarina: **MCP 12767,** Paratype, Mun. Campos Novos, rio Canoas at road BR- 282 between Sao Jose do Cerrito and Vargem, Campos Novos, Col. C. Lucena *et al.*, 12-13/XI/1988; **MCP 12475,** Paratype, Rio Jacutinga on road BR-283 between Seara and Concordia, 27°10' S, 52°9' W, Col. E. Pereira *et al.*, 2/X/1988; **MCP 13935**. Paratype, same data as MCP 12475; **MCP 13007**, Paratype, Rio Uruguai, Ita., 27°18' S, 52°20' W, Col. R. Reis *et al.*, 7-8/XII/1988; **MCP 20921,** Rio Iracema, Riqueza, 27°8' S, 53°20' W; **MCP 20920,** Rio das Antas on road BR-282, 20 km E of São Miguel do Oeste, Descanso, 26°49'18" S, 53°22'48" W; **MCP 18715 and MCP 18940,** Rio Rancho Grande, road Piritiba/BR-153, Concordia, 27°21' S, 51°57' W; **MCP 18934,** Rio do Engano (or Uvá), road Itá to Seara, Itá, 27°9' S, 52°13' W.